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ABSTRACT

This PLATO (registered) mathematics curriculum was used in a pilot study as a continuing education offering for employees of an Amoco Fabric and Fibers plant in North Carolina. Thirty-eight Amoco employees used the PLATO learning system over a 6-month period, during which time their progress, in terms of grade level mastery and time, in terms of hours logged in to PLATO courseware, were tracked. The learners experienced an average gain of 1.6 grade levels during the pilot period (range of 0.0 to 4.8 grade levels) with an average of 26 hours, 36 minutes spent logged in (range from 0 hours, 17 minutes to 123 hours, 45 minutes). The Amoco learners also completed questionnaires about their experience and participated in a focus group at the end of the pilot period. Their responses indicated a positive attitude toward the PLATO learning system, a continued interest in using PLATO courseware and a commitment to continued learning for personal and job-related reasons. This form of computer-based training, with its individual learning paths, flexible time schedule, and learner-determined pacing, has proven to be an appropriate and effective way of meeting this population's continuing mathematics needs. The demand for continued PLATO offerings at Amoco Fabric and Fibers is present. Improvements to the PLATO implementation at Amoco could take the form of on-the-job time for using PLATO, faster computer set-up, motivational employee incentives and rewards, and an instructor or other live assistance to facilitate using PLATO. Three appendixes contain the questionnaire and focus group responses. (Author/SLD)

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Amoco Fabric and Fibers

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Evaluation Prepared by:

Vanessa Dennen
Indiana University

Series Editor:

Rob Foshay, Ph. D.

Vice President,
Instructional Design and Cognitive Learning

PLATO Learning, Inc.
10801 Nesbitt Avenue South
Bloomington, MN 55437 USA
(800) 869-2000
Fax: (952) 832-1200
http://www.PLATO.com
rfoshay@plato.com

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Executive Summary

The PLATO® math curriculum was used in a pilot study as a continuing education offering for employees of the Amoco Fabric and Fibers plant in North Carolina. Thirty-eight Amoco employees used the PLATO® learning system over a six-month period, during which time their progress, in terms of grade level mastery, and time, in terms of hours logged in to PLATO® courseware, were tracked. The learners experienced an average gain of 1.6 grade levels during the pilot period (range of 0 to 4.8 grade levels) with an average of 26 hours 36 minutes spent logged in (range from 0 hours 17 minutes to 123 hours 45 minutes).

The Amoco learners also completed questionnaires about their experience and participated in a focus group at the end of the pilot period. Their responses indicated a positive attitude toward the PLATO learning system, a continued interest in using PLATO courseware and a commitment to continued learning for personal and job-related reasons. This form of computer-based training, with its individual learning paths, flexible time schedule, and learner-determined pacing, has proven to be an appropriate and effective way of meeting this population's continuing education needs.

The demand for continued PLATO offerings at Amoco Fabric and Fibers is present. Improvements to the PLATO implementation at Amoco could take place in the form of on-the-job time for using PLATO, faster computer set-up, motivational employee incentives and rewards and an instructor or other live assistance to facilitate using PLATO.

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Program Description

The Amoco Fabrics and Fibers plant in North Carolina offers the PLATO® system to its employees as an ongoing educational opportunity. This evaluation examines the experiences of 38 Amoco employees who participated in a 6 month pilot study using PLATO at their work site.

Amoco Fabrics and Fibers began offering PLATO to its employees in 1996 on a trial basis, to see how the educational opportunity was received and used. The initial focus was on developing math skills. Amoco's PLATO system is used as a stand-alone learning environment; no outside learning materials are used, nor do learners use PLATO to prepare for any outside test. While in some instances the mathematics topics covered in PLATO curricula and courses are directly relevant to some Amoco employee's job duties, PLATO courses used at this site are not necessarily directly contextualized to jobs. Learners were required to participate in the math curriculum as that was Amoco's main interest, but they were also free to explore the PLATO system and work in the course areas that were of personal interest. Amoco opted to participate in a pilot study evaluation of its PLATO system to find out how its employees were getting involved and what educational gains it was providing them.

The PLATO system was implemented on a volunteer basis at the Amoco site. Forty employees, primarily production plant workers, were originally slated to participate in this educational program. These employees were selected based through mutual agreement between themselves and their human resources director that they would benefit from participation in the pilot study. It was not required that they participate, nor did their participation have any direct bearing or consequences on their employment. Thirty-eight of the forty selected employees actually began using the PLATO system in this pilot offering.

Learners in this pilot study were asked to try PLATO on their own time. They were not paid for their participation; all efforts were strictly on a volunteer basis. Incentives for participation came in the form of a little reward, specifically a calculator for each participant who completed the pilot study. Learners were asked to us PLATO for at least two hours per week, and to participate in a focus group and fill out a survey about their experiences using PLATO.

At the beginning of the study, learners used the FASTRACK math curriculum placement system to determine their current grade level and proper learning path through the system. The data generated by their participation, such as modules attempted, mastery scores, and time logged in to modules, were collected from the PLATO system and analyzed to further determine how they used PLATO and what results they found. All learner data were gathered and analyzed anonymously.

As this pilot did not occur in a structured, classroom-based environment, and learners worked on the system independently and without instructor guidance, there was no instructor data to be collected at this site. Human resources personnel facilitate the local implementation of the program with assistance from PLATO Learning and learners take responsibility for their own involvement.

The Amoco facilities in which PLATO courseware is used consists of a six-computer lab. The computers in this lab were not used for other purposes during the pilot study. The lab did become congested at popular times such as lunch hour and shift endings, but a reservation book let participants sign up for computers in advance to ensure that a computer would be available when they wanted to work in PLATO.

Learners used PLATO by starting from a floppy disk. This factor is likely to have slowed down the computers as learners tried to access data from the disk drive.

Data Analysis

PLATO Results

This pilot study began with a placement test and ended with a review of student progress. Using the FASTRACK system, students were initially required to take Grade Level Series Assessment Tests, which required them to master 75% of a module's objectives and 80% of a grade level's modules in order to pass a grade level[1]. Based on their performance on these tests, students were placed at an initial grade level (the first non-mastered grade level) and given an individual learning path within the PLATO system. As students followed their learning paths, the system tracked their progress and assigned grade level gains as modules were mastered. Thirty-nine students took the FASTRACK placement test, and 38 began working on individual learning paths.

The participants in the Amoco pilot study began the study period with an average math grade level of 6; by the end of the study period, their average grade level had risen to 7.4, with an average gain of 1.6 grade levels. It is important to note that this average contains data from all 38 students who completed the initial FASTRACK grade level placement tests and began an individual learning path, regardless of the amount of time spent working on an individual learning path. Of these 38 students who began using PLATO, 21 (55%) experienced a grade level gain of 1.0 grade levels or higher. Six students (16%) experienced gains of greater than 4.0 grade levels during this study, and 7 students (18%) mastered the highest level module of the FASTRACK math curriculum. Figure 1 demonstrates the individual grade-level gains experienced by all 38 pilot participants. Figure 2 summarizes the grade-level gains experienced by all 38 participants.

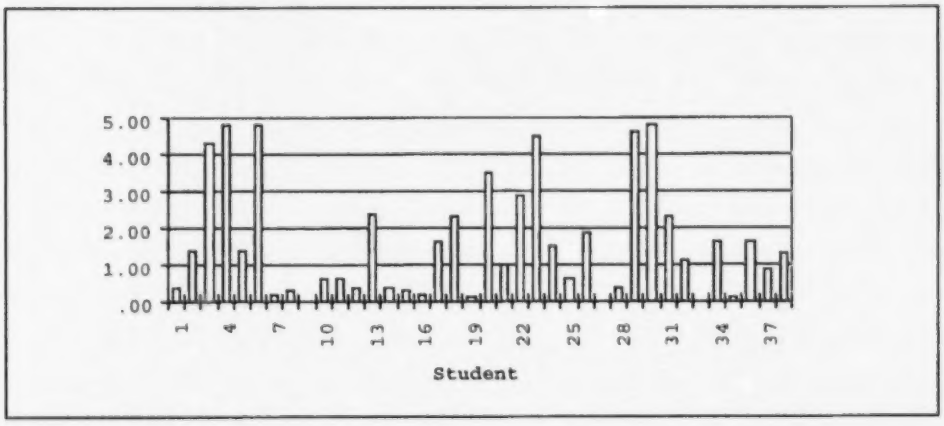

Figure 1: Individual Grade-Level Gains

[1] In the PLATO system, grade levels are criterion-referenced. Thus, there is only an indirect relationship of these figures to those that would come from a norm-referenced standardized test.

The Amoco students spent an average of 26 hours 36 minutes logged into the PLATO system during the pilot period, with a range from 0 hours 17 minutes to 123 hours 45 minutes. Figure 3 demonstrates the various time participation levels of students. Only 6 students (16%) met or exceeded the minimum requested participation time of 2 hours per week, which for a six-month period would be 52 hours. As well, the average time students were logged in to PLATO is higher than their actual usage time; there are several instances in which the data indicate students logged into a particular module for over 10 hours, suggesting that at some times students forgot to log off the system when leaving. As a result, data are not available for actual time spent on task.

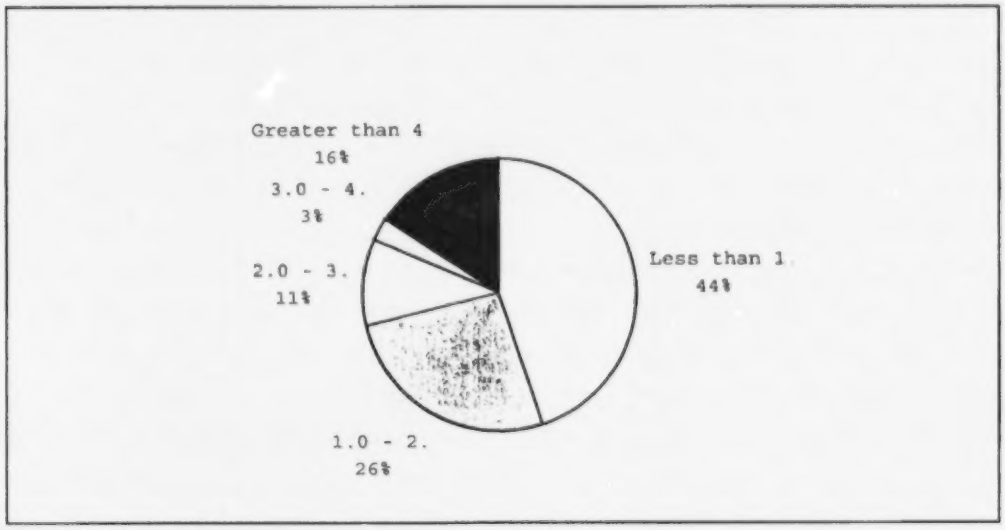

Figure 2: Summarized Grade-Level Gains

The correlation between amount of time spent logged into PLATO and grade level gain is 0.84, indicating the direct relationship between PLATO use and learning. Again, the time factor may be inaccurate in this study, erring on the side of being recorded too high, as it is representative of time logged in and not time on task; however, no student spent more than 4 hours 19 minutes logged into the system without showing some gain. All but one of the students who were logged in to PLATO more than 30 hours PLATO achieved gains of greater than 2 grade levels. Figure 4 demonstrates the relationship between time logged into PLATO and grade-level gain for each student.

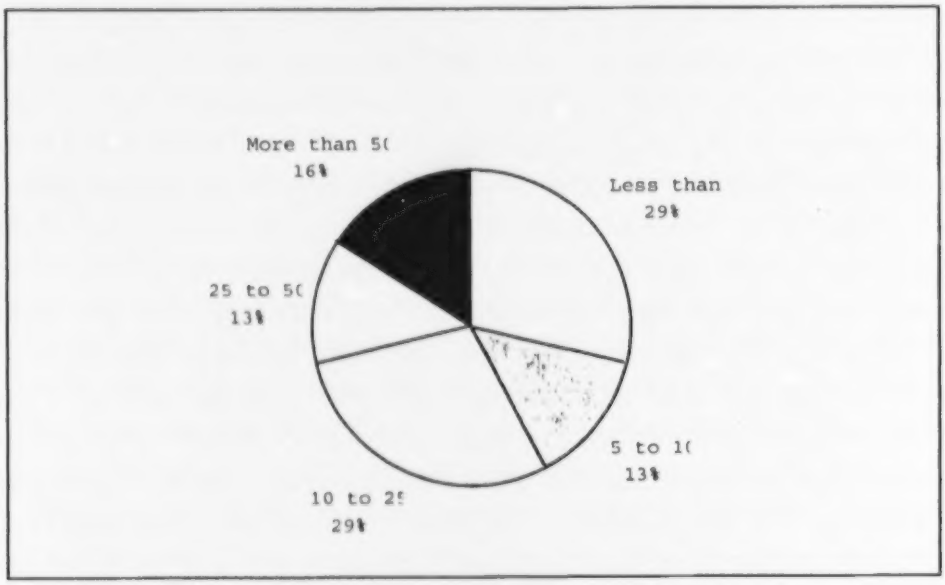

Figure 3: Mean PLATO log-in times (in hours, cum. for 6-month pilot period)

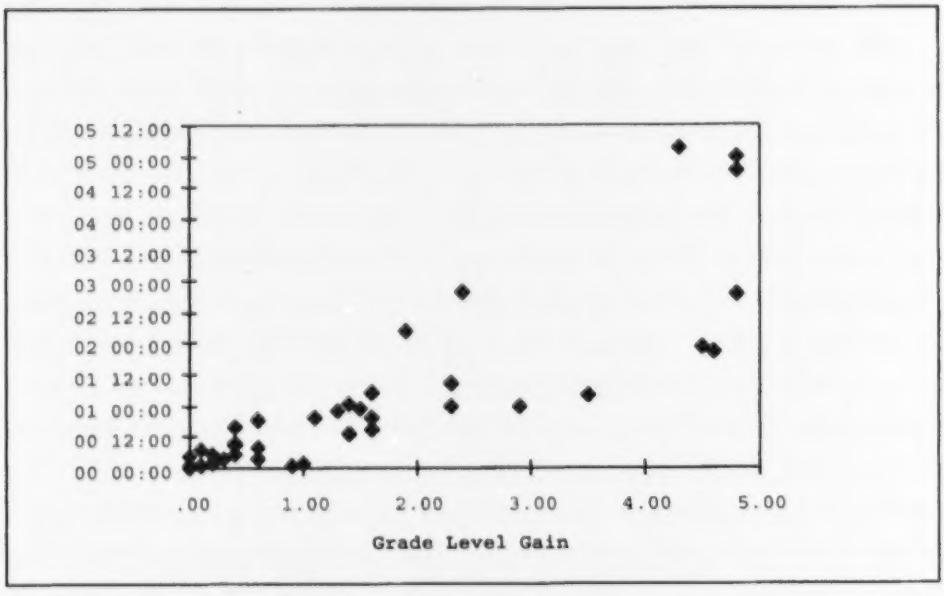

Figure 4: Individual Grade-Level Gain by Log-in Time

Learner Questionnaire

An attitude questionnaire featuring 15 close-ended and 6 open-ended questions was administered to 26 of the learner's. The questions focus on PLATO's ease of use, the learners' comfort with computers and PLATO, and the learners' experiences with computers and PLATO. The questionnaire results indicated that the learners felt comfortable using PLATO. All survey items except for 11 and 13 were positively worded questions. The mean response to each of the thirteen positively worded questions was in the strongly agree-agree range. . The mean response for all items, with correction for the negatively worded items, is 4.05, indicating again the learner's positive reaction to using the PLATO system. Figure 5 provides a graphical representation of the mean response for each item. A listing of each item along with its frequency distribution and mean response appears in Appendix A.

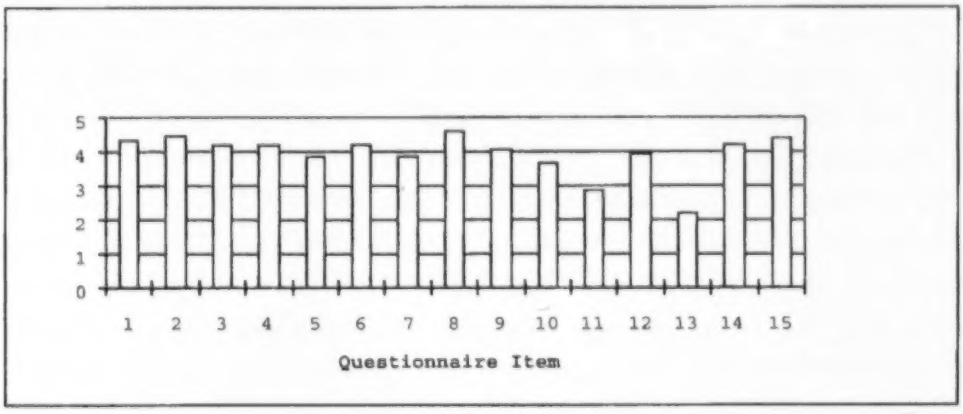

Figure 5: Mean Learner Questionnaire Responses

In their responses to the open-ended questions, learners indicated again a positive PLATO experience, with the feeling that they had been learning and benefiting from their use or the system. A complete listing of responses to open-ended questionnaire items appears in Appendix B.

The learners particularly liked the independent learning paths created by PLATO and the ability to control their own pace, an issue mentioned by 11 participants, stating "I can work at my own pace. If I have trouble with a particular lesson I can review it until I get it.", "If I have trouble with a particular lesson I can review it until I get it." and "It is a one on one learning program. I don't have anyone breathing down my back." These adult learners also felt that PLATO helped them recall, refresh and build upon their prior learning experiences, stating "It refreshes your memory on things that you probably forgot all about and enlightens you on things you might not know."

Time, the need for human assistance and computer speed were the three main concerns of the learners. First, they found it difficult to find the time to work on PLATO, which can clearly be seen in their participation levels. These participants worked full-time and were not paid for their participation; with all of their other responsibilities and commitments and despite their desire to learn, PLATO often did not get their attention. There was no instructor for these learners, which was an element that they missed. One learner said "Sometime you need a human touch," a sentiment that was echoed by others. They indicated that at times they had questions or needed help, and they had no one to ask. Finally, learners indicated that they found the speed of the system to be a bit slow; they wished that they could work through problems. In their lab they worked from floppy disks rather than a hard drive or network, which did slow down their functioning.

When asked what they would change or how they would improve the course, most learners indicated that they would not make any changes and that they did not have any suggestions. On the implementation side, learners again mentioned their difficulty finding time to work in PLATO. On the software side, they indicated that they would like more user control ("The ability to escape from a part that you do not need to study." "I would prefer to solve the problem from the start."), and more instructions and examples ("Some lessons need to be explained more clearly.").

Most of the learners expressed confidence that their experiences with the PLATO math curriculum would help them with their jobs. 16 respondents said that PLATO definitely would help, 5 felt that it might and only 2 said that it was not applicable to their jobs. Several learners further indicated that PLATO was helping them on a more general or personal level.

When asked if they would recommend using PLATO to other employees the learners gave an overall positive response, with 19 saying that they would recommend PLATO, 3 saying that they would recommend it selectively or conditionally, and only one person saying that they would not recommend it. Comments stated that they would tell others to experience PLATO because "it can only help, not hinder" and "no one knows everything so there is always room for improvement."

Focus Group

A focus group was conducted at the end of the 6-month pilot period to provide another opportunity to gather data from the learners about their experiences using PLATO. The focus group questions and a summary of responses appears in Appendix C. During the focus group, learners echoed many of the sentiments they raised in the questionnaires. They indicated their decision to participate in the program was motivated out of a desire to learn, for both personal and job-related reasons. Once they began using PLATO, they enjoyed their experience and wanted to keep learning.

Time was the biggest problem for these learners. They had difficulty finding a few hours a week to spend with the program and recommended having PLATO accessible at home or having company time to work in the system. Learners explained that they had been working on their lunch hours and coming in on their days off to use PLATO.

Their comments based on experiences using the system indicated that they would like more help and instructions. At times they did not understand the response format that the computer was looking for, although they may have understood the relevant curricular content, and some tasks such as bookmarking were confusing to the learners.

These learners felt that learning on the computer was easier for them than learning through a traditional class. They liked the anonymity of interacting with a computer and the freedom to work at their own pace and on their own schedule. The learners indicated that they would not have been able to successfully complete a traditional class given their work schedules and other responsibilities.

Using PLATO met both job-related and personal needs of the employees, to varying degrees depending on the individual, their job, and their personal goals. Learners who did not currently need math or computer skills for their jobs stated that they might have to use them in the future and that they were willing to keep learning in order to keep their skills and abilities current.

For future PLATO implementations at this site, learners suggested that extra help be provided to assist with keyboarding skills and basic computer skills. They also indicated that tutors, mentors or instructors would be nice and that some incentives should be given to encourage employees to participate and complete programs.

Conclusions & Discussion

Overall the PLATO implementation at Amoco Fabric and Fibers seems to be a positively received although underutilized offering. The learner performance data indicate that the learners who were able to find the time to devote to PLATO experienced multiple grade-level gains within a six-month period while using the program just a few hours per week. Other learners experienced various smaller levels of gain, and questionnaire and focus group data indicate that these learners were aware that they were not maximizing the potential of the PLATO offering, largely due to time constraints.

Learners at this site felt that continuing education is important, and they stated that they had both job-related and personal reasons for using PLATO. Their experiences in PLATO helped boost their confidence with both math concepts and computers, and they indicated and interest in continued PLATO participation, including use of other curricula. Overall, these learners seemed satisfied with their PLATO experience and felt that what they accomplished was appropriate given their efforts.

Time and motivation appear to be key elements for learner success at this site. The learners had difficulty fitting PLATO into their busy schedules, and found it necessary to work on lunch hours, which some learners felt were too short to be an adequate learning period or on their days off, in order to use PLATO. Their motivation to use PLATO depended on factors such as their job duties (some learners felt it would help them perform better), their personal goals (some learners wanted to further their education or keep up with their children), and the rewards they felt they would reap in the workplace (some learners wanted incentives or rewards to encourage their participation). These two critical elements are highly interrelated, as a motivated employee with more likely find the time to use PLATO than an unmotivated one.

Amoco learners suggested numerous changes or additions that could be made to the current implementation to improve the participation in and efficiency of PLATO use at this site. Responding directly to the time and motivation problems, learners recommended that they be given paid time to work on their PLATO lessons and/or non-monetary rewards for their achievements. Learners also recommended having a person who could assist them when they had questions that the computer could not answer or when they needed help using the computer.

The learners recommended that the PLATO program have better instructions and provide more and better examples for them to review in some areas. The input of fractions, in particular, was frustrating for these learners, as was inconsistency in some modules between the display of answers in the examples versus the expected format for the learner's answers.[2]

Despite difficulties with time, motivation and some of the program modules, this Implementation of the PLATO system has several positive elements. With some modifications in its implementation, it appears that PLATO could be used as a very effective continuing education tool at this site.

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[2] These issues have since been addressed in a subsequent release of the courseware.

Appendix A:

Learner Questionnaire Results, Close-ended Questions

The following rating scale was used by the respondents:

SA if you **strongly agree**
A if you **agree**
N if you **neither agree nor disagree**
D if you **disagree**
SD if you **strongly disagree**

Question		SA (5)	A (4)	N (3)	D (2)	SD (1)	N	Mean (SD)
1.	I am able to sign on to the computer without problems.	19	6	1	1	2	29	4.34 (1.17)
2.	Getting to my lesson is easy.	17	8	0	1	1	27	4.44 (0.97)
3.	The computer is easy to use.	15	9	1	4	0	29	4.21 (1.05)
4.	I can start and stop a lesson whenever I want.	14	11	1	2	1	29	4.21 (1.05)
5.	The computer lets me do something (like answer questions) often and not mainly just watch.	7	15	4	2	1	29	3.86 (0.99)
6.	I usually can understand what the computer teaches me, without help from my instructor.	9	18	1	0	1	29	4.17 (0.80)
7.	The computer gives me help when I need it.	8	12	7	1	1	29	3.86 (0.99)
8.	I can work at my own pace on the computer.	18	8	2	0	0	28	4.57 (0.63)

9.	I feel I'm studying what I need to on the computer.	6	19	4	0	0	29	4.07 (0.59)
10.	The lessons on the computer are designed for people like me.	5	13	9	0	2	29	3.66 (1.01)
11.	When I give a wrong answer on the computer, I feel bad about myself.	4	5	10	4	6	29	2.90 (1.32)
12.	I would like more time to study on the computer.	9	13	4	2	1	29	3.93 (1.03)
13.	The computer makes me nervous.	1	4	4	11	9	29	2.21 (1.15)
14.	Working on the computer makes me feel good about myself.	12	12	4	1	0	29	4.21 (0.82)
15.	I recommend learning from the computer.	13	14	2	0	0	29	4.38 (0.62)

Appendix B:

Learner Questionnaire Results, Open-ended Questions

1. What do you like best about learning from the computer?

1. There is no maybe involved. Its either right or wrong.
2. Working on the computer. I've always been fascinated with the computer, but I really don't have much knowledge about them. Working on the PLATO system not only teaches you better ways of doing math, but also it helps you learn your way around the computer.
3. Knowledge
4. The thing I like best about learning from the computer is that I can work at my own pace.
5. Math and knowledge
6. Everything. The best thing is learning how to operate the computer to find what your are looking for. Computers carries a lot of information itself.
7. If I don't understand I can go over the tutor again.
8. The computer helps you a lot, refreshes your mind all the time.
9. Its step by step process and being able to back up.
10. I can work at my own pace and it gives me a chance to work with the computer.
11. It is a one on one learning program. I don't have anyone breathing down my back.
12. Self-paced and one-on-one class.
13. You can learn on your own time, at your own pace and in a more standardized style than most people use.
14. Bringing back all the things you were taught a long time ago.
15. Much faster than on paper and pencil.
16. It wakes up old things you've heard in the past and have forgotten.
17. It teaches you at your own pace. It do not rush you into finishing a problem.
18. It refreshes your memory on things that you probably forgot all about and enlightens you on things you might not know.
19. You can work at your own pace so you don't have to be rushed.
20. How to get into the computer system and which button to smash.
21. That I can work at my own pace. If I have trouble with a particular lesson I can review it until I get it.
22. To learn and study at my own pace.
23. Advance in my job bettering myself

2. What do you like least about learning from the computer?

1. The access time involved.
2. Sometimes the computer takes me too slowly. The computer usually works step by step on how to solve a problem instead of just letting me completely solve the problem.
3. Not each time.
4. The thing that I like least about learning on the computer is that there is no one to let you know all of the flukes in the system before you answer your question in the wrong format.
5. I love it
6. Sitting at a computer sometimes make sleepy, other than that I love the computer because it challenge me to learn how to mast it and its software.
7. Earphones don't work good at times.
8. Nothing but it gives me the creeps sometimes. I guess just thinking its a computer the whole time.
9. Sometime getting to the next lesson and not being able to take advantage of the program more often.
10. Sometimes I need some help and there is no one there to help.
11. Sometime you need a human touch.
12. Can't ask it questions.
13. If there's a hard problem or something you just don't understand, the computer can't probe your mind and help you to understand.
14. Don't have enough time to work with it.
15. It is very slow.
16. Not being able to ask it questions. Sometimes you need to ask a question about some of the problems.
17. doing it on your own time, because there's hardly any time with me working evening shift and overtime, but I manage.
18. Sometimes it seems to go a little slow and doesn't show why the answer you gave was wrong.
19. The hard math question that they have in it that I didn't take in school.
20. I really can't think of anything I like least about the Plato.
21. Some parts are mind boggling
22. Going in and out

3. How would you change the computer lessons or the way you use them?

1. No change -8
2. As I stated in #2, I would prefer to solve the problem from the start. Then on ones that I have a problem solving, let me take those step by step to help me find out what I'm doing wrong.
3. A help screen would be very helpful for the various functions that the system require. For example alt+F = fraction.
4. Nothing I guess because whoever it is make-up the lessons.
5. I would like to spend more time with the computer.
6. I would not make any changes because it gives you all the time you need.
7. Find more time.
8. I wouldn't. I would keep them basically as they are. Simple.
9. Some lessons need to be explained more clearly.
10. The ability to escape from a part that you do not need to study.
11. There's not much, if anything, that I would change. Just being able to communicate with it a little better is about all.
12. Maybe on a section a person is having problems with it can give more examples.
13. Show me the easy way of doing the math system.
14. Need more time
15. Sometimes I think there could be more instructions
16. During working hours

4. What suggestions do you have to improve any part of this course?

1. None - 4
2. The variety of different subjects was mentioned in the orientation. I think that's a good idea.
3. Basically I don't have any other suggestions. but I must add that I really enjoy the courses because you get to work at your own pace without feeling pressured about how long it should take you to finish a lesson.
4. The inconsistency in this system is really ridiculous and really frustrating. During the tutorial session a format should be established. Instead of this being the case the format is changed during the drill session. This is very frustrating because if your answer is correct, but if it is not in the format that the system wants, you are marked with a wrong answer. Many of us do not like this because it lowers our scores. I realize that it is only a drill, but I do not wish to receive a low score because the system does not make the format required plain. An example of this occurrence can be found in the mixed numbers session. During the tutorial session all answers were in the simplest form. When I tries to give my answers in this format during the drill the system rejected it and marked my answer wrong. In case you are wondering if I had the wrong answer I did not. The problem was 2 2/4 + 4 3/4. My answer was 7 1/4. The system answer was 6 5/4.
5. Before I make any suggestions I have to get through the complete course. Using the computer is a new experience and very challenging.
6. Just take your time. Never be in a rush because a rush job is your worse job.
7. For me the course is good just as it is.
8. None so far. I need to get deeper in the program.
9. Find a way to spend more time with it. Everyone using the system is trying to set their times at the same time.
10. Going back to the questions and correcting them after you have failed them.
11. I wouldn't necessarily try to improve it, just make it more rewarding. I suggest that the people who volunteer and finish should be rewarded. A PLATO T-shirt that shows that they finished it would be nice.
12. Don't take it, because I have forgot how to do certain parts of math problems.
13. Let employees work on company time.
14. I really think Plato is a good move
15. Have none.
16. Help

5. Will your learning on the computer help you in your current job?

1. Yes - 9
2. No.
3. Of course. Math is very essential to mostly all types of jobs.
4. At this present time, no, because in my work area we only use the computers to pull up our OI's, but technology is advancing all the time and probably in the near future we will use the computers more.
5. The things that I have learned on the computer will help me with my job because I am the back up person for our purchasing clerk.
6. Yes, because one of my weakness is math. I know the basics. The reading math question give me the most problems. The computer teaches me a lot.
7. Maybe, not sure
8. To a certain extent, especially when you have a meter pump change.
9. Yes and future schooling if possible.
10. I feel like it will in the long run, because we're advancing technologically every day so in order to stay abreast with what's going on we need to brush up on the math skills.
11. Yes, by using math every day on my job also helps me with the computer.
12. I don't know, but it will help me personally to freshen up my skills that I have forgotten.
13. Yes, and it also will help you learn different things on a personal level.
14. No, not really, my job doesn't call for all that.
15. Somewhat if not here then someplace, because we deal with numbers on a daily basis. Either here or our personal lives.
16. Not really sure.

6. Do you recommend other employees use the PLATO system as a learning tool?

1. Yes – 13
2. No
3. Of course! Especially those who are aware that they have a problem with math. The system is very helpful. Also no one knows everything so there is always room for improvement.
4. Once the system has been made more user friendly I would recommend other employees to the PLATO system.
5. Most definitely
6. Yes because it is a learning experience. PLATO is great for math skills. Learning how to operate a computer and getting what I want out of it is very rewarding to me as for a job concern.
7. Yes, you can always learn something new because what's old is sometimes forgotten.
8. Yes. It can only help, not hinder.
9. If they are interested. You have to really motivate.
10. Yes. Only if they would be committed to it.
11. Yes, I do, for work purposes or your own individual goals.
12. I strongly recommend if for anyone. I'm glad I got involved.

Appendix C:

AMOCO Focus Group Questions

The following questions were asked in a focus group of learners. The focus group was conducted after the 6-month pilot period had ended.

Participation

1. Why did you decide to participate in the PLATO pilot program?
2. Why did you stay with the program, or if you did not, why didn't you?
3. If you did not, what would have made you stay with it? What needs to change to maintain participation?

The System

1. What was easy or hard about getting started with PLATO?
2. After taking the initial assessment, did you feel you were working on lessons that were either too easy or too difficult?
3. How much in control of the system did you feel? How did this change from when you began to later in the pilot?
4. What do you like best about learning using PLATO?
5. What do you like least?

Results/Suggestions

1. Did your work in PLATO have an effect on how you do your job? If so, how?
2. Did your work in PLATO have an effect on you personally? How?
3. What suggestions do you have for introducing PLATO in other Amoco facilities?
4. What advice would you give fellow employees in other plants about the program?
5. What else would you like us (Amoco and PLATO) to know about the program?

AMOCO Focus Group – Response Summary

Participation

- couldn't hurt - learn something
- benefit with my kids
- math is the hardest - I can learn it better this way
- renew my skills
- work in a lab on math skills
- being a mentor at (a) middle school
- own children, own benefit
- kids
- own benefit - didn't have some of the math when I was in school
- always loved math and this was a challenge
- didn't know about computers
- job and personal

Motivation

- enjoyed it
- got on a roll and wanted to stay with it
- hooked on it
- after 8 hours on the floor, I found it relaxing
- gives me a break
- keeps mind off other "home" things
- wanted to learn more

Time

- started off with 6 hours a week, then cut back
- worked during lunch with my husband
- biggest problem was getting the time to spend in PLATO
- about one-half of employees stayed in the 2 hours a week time frame
- two hours was OK but doing on lunch hour was too hard
- came on days off
- could put in more hours if I had it at home
- have it available on company time
- hard time getting in - personal and family issues

PLATO System:

- getting started was fairly easy
- computer was slow - 20 seconds for each question (discussed whether this was due to not turning off the audio)
- audio/non-audio was a problem (make non-audio the default!!)
- alt-f was a problem
- system explaining well enough and how to get back and forth
- have to do problems the way the computer wants it rather than the best way
- format - when they wanted to whole number vs. a decimal
- need clearer directions
- know answer is right and computer won't accept it
- didn't understand bookmarking
- in Estimating course - inconsistency if way to enter answers (4 decimal places in conversion chart and answer is 2 decimal places
- calculator was too hard (wasn't using mouse)
- first time in need to have a person there to help
- need chart for keystrokes (science & calculus)
- better orientation
- couldn't get past some sections (bookmarking to beginning of section & during lunch time there wasn't enough time to complete tutorial
- notetaking is very important
- some didn't teach as well (diameter, radius, parallelograms, theorems, binomials --need more depth because the test was harder that the tutorial)

Assessments

- need advanced notice about taking an assessment test
- didn't understand bookmarking
- level was right
- level was too easy (admitted to not reading carefully)
- probably about right
- after geometry and time zones, goes back to multiplication
- need worksheets organized by FASTRACK curriculum presentation

Liked Best

- learning on the computer
- challenge of math
- curriculum is a challenge and is better than being in a classroom

Liked Least

- here instead of home
- lag time between problems
- computers can be intimidating
- got bored being constrained to math
- not enough time - reading the screen takes time

CBT vs. Classroom

- easier - do it at own time and rate
- instructors can help in classroom
- in lab - no tutor
- some people are ashamed of their level and the computer helps
- available when I want it as opposed to a class
- can't work on swing-shift and do classes

Job Related

- don't use computers; don't use math but in future I might have too
- has helped me more personally than on the job
- have learned more and feel better about myself and that helps how I do my job
- need math for flowcharts and SPC
- volume and mass solutions, ratios, percentages and work problems done on job
- estimating - weight distribution
- more personal
- change in technology - knowing that job will change
- if job requires it, I'll learn it
- ISO - oral interpretation and speaking needed
- percents and SPC charts
- feel better and proud - if I feel good about myself, I'll do a better job
- sharpen skills in general
- helps with kids than with job
- more personal than work
- equipment has more computers
- helps with SPC training - ISO auditors; need math and reading skills
- probably related to job to some degree
- more personal achievement

Suggestions to get participation

- set up Intro to Computers program
- need keyboarding course
- need "help" available
- with others in there and you have a problem, you can get help
- need tutors available - not from AMOCO!
- company help would be good
- those in program can help stimulate curiosity of others
- some measurement of seeing how well I am doing - see report results
- pay to me a Mentor
- dependent usage
- employee/family
- enhanced skills
- for each program finished - some incentive
- can have non-monetary incentives
- after 7 straight days - have to do it while you're here rather than come back

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